As part of the legislation passed last session to create the new Department of Health and Human Services (DHHS), the Bureau of Health was renamed the Maine Center for Disease Control and Prevention (Maine CDC). The federal Centers for Disease Control and Prevention will be referenced as "CDC".

The purpose of the Epi-Gram is to distribute timely and science-based information to guide Maine's healthcare professionals in issues of public health and infectious disease importance and to promote statewide infectious disease surveillance.

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December 2005 Issue Contents

Tuberculosis Prevention and Control Recommendations for Maine's Homeless Shelters

In the decade preceding the year 2002, an average of one case of tuberculosis (TB) per year was identified among homeless individuals in Maine. Between June of 2002 and December of 2003, eight cases of TB were diagnosed among homeless men in Portland. All of the cases occurred among white, U.S. born, substance-abusing men (primarily alcohol dependent). The men had all utilized homeless and medical services in Portland, or had been incarcerated at

the county jail. Five of the eight cases were linked by DNA fingerprinting. One individual was co-infected with HIV and three were co-infected with Hepatitis C. No cases of drug-resistant TB were identified. Thanks to the dedication and hard work of a multi-agency case management team, all of the individuals completed treatment.

The City of Portland Public Health Division (PPHD), Maine CDC and CDC collaborated to plan and conduct an extensive contact investigation. The contact investigation has been going on for two years and will continue until all of the exposed contacts are located. Many of the exposed contacts are no longer living in Portland. Some may have left the state. Some have refused evaluation. Maine CDC and PPHD continue to collaborate with shelter programs, correctional centers and medical providers to locate and evaluate exposed individuals.

More than one thousand contacts of the eight active cases were identified. Nearly 70% of exposed contacts were located and received at least one tuberculin skin test. One hundred and two individuals were identified as tuberculin reactors and sixteen skin test conversions were documented. Two thirds of the tuberculin reactors were located and evaluated. Thirty individuals were treated for latent TB infection. Despite the challenges posed by substance abuse, residential instability and co-morbid conditions, the treatment completion rate for these contacts was 93%. This contact investigation has required hundreds of hours of staff time in locating and evaluating exposed individuals and monitoring treatment.

Homeless individuals remain at high risk for tuberculosis infection due to substance abuse, compromised health status and crowded living conditions. Providers should "Think TB" when evaluating individuals in settings where homeless persons often receive health care: emergency rooms, free clinics and correctional settings.

Establishment of TB/Shelter Work Group

During the winter of 2004, a *TB Prevention Shelter Work Group* (TBPSWG) was established to respond to the urgent need for TB prevention and case-finding in homeless shelters. The Work Group was comprised of homeless services providers and representatives from the Maine State Housing Authority, Maine CDC and PPHD. The TBPSWG represented a critical partnership between public health entities and the social services support system that interfaces with homeless men and women throughout the state. During the winter and spring of 2004, the TBPSWG met bi-monthly to identify challenges to TB prevention in the homeless population and to design appropriate interventions.

Objectives of the TB Prevention Shelter Work Group:

- **To define the problem with regard to TB prevention and case-finding in the homeless population in Maine**
- **To understand the barriers to effective prevention and case finding in the homeless services system in Maine**
- **To craft a formalized, organized, statewide response to the increasing incidence of TB among Maine's homeless population**

Components of a TB Prevention/Surveillance Program:
Through this community planning process, the TBPSWG identified the framework around which Maine's shelter TB prevention and surveillance polices would be developed. To meet the needs of a diverse shelter population spread over a wide and variable geographic area, the resulting prevention plan accounted for local differences in shelter guest demographics and levels of risk:

- **Local access to health care**
- **Local customs and norms**
- **Uneven resource allocation**

- Differing values among staff
- Variance in levels of staff and provider TB awareness in areas of traditionally low TB incidence
- Epidemiology of TB in Maine

With these variables in mind, the TBPSWG concluded that crafting a statewide plan must take into account and respect local differences, as well as provide concrete assistance to shelters that are working to develop TB prevention and case finding protocols and plans. Components of a shelter TB prevention/surveillance plan:

- Needs assessment
- Staff education
- Shelter guest education
- Staff screening
- Shelter guest screening
- Access to medical care
- Engineering controls
- Evaluation

Over a period of months, the TBPSWG developed recommendations that are specifically targeted toward prevention and controlling TB in Maine's homeless shelters and supported by Maine's TB Control Program. The work of this dedicated team is summarized in the document: *Tuberculosis Prevention and Control Recommendations for Homeless Shelters in Maine* and it's accompanying *Shelter Tool Kit.* The document may be obtained by calling TB Control (207) 287-8157 and is also available at the Maine CDC website: http://www.maine.gov/dhhs/boh/ddc/

Contributed by Suzanne Gunston

Maine to Change Methods for HIV Data Collection and Storage

Beginning January 1, 2006, Maine CDC will require name-based HIV reporting and will store patient names in the confidential HIV case registry.

HIV is one of almost 70 infectious diseases or conditions that are reportable to Maine CDC for the purposes of public health disease prevention and control. For the past several years, Maine CDC has used a "name-to-code" system for HIV reporting. This system has required that health care providers report the name or coded identifier of persons diagnosed with HIV. After epidemiologic follow-up, names are converted to a unique code for storage in Maine CDC case registry. Although this system has performed well in Maine, it must now be changed for several important reasons.

This past July, CDC released a letter strongly recommending that all states quickly move to adopt name-based HIV reporting and data storage. The letter stated that "implementation of a scientifically accurate and reliable system of national HIV reporting can only occur with the adoption of a standard system of patient identification that can be used by all states." Further, the CDC indicated that it will not accept HIV data from states that employ code or name-to-code systems.

In addition, Congress recently mandated use of CDC-supplied HIV data to determine levels of funding under the Ryan White Care Act, an important source of federal dollars that allows Maine to provide critical services to people living with HIV. Currently, Maine's HIV data are not accepted by CDC, which could jeopardize future Ryan White funding.

Maine's change to name-based HIV reporting and data storage will not affect Maine CDC-funded anonymous testing, which will continue to be widely available throughout the state. Please note that all Maine CDC data containing patient identifiers are held in strictest confidence, and names are never released to the public. All data reported to the CDC is stripped of names and patient identifiers before submission.

For further information, please contact Mark Griswold or Bob Woods at the HIV, STD and Viral Hepatitis Program at (207) 287-3747.

Contributed by Mark Griswold

HIV and HCV Co-infection in Maine: Data and a Free Treatment Option

Background

Maine CDC estimates that just under 1,100 Maine residents have been diagnosed with HIV infection. Of these, approximately 6.5% are also infected with the hepatitis C virus (HCV). While this is in sharp contrast to national data, which suggest 25% of HIV-infected persons are also infected with hepatitis C, it is possible that Maine numbers are low due to underreporting and lack of testing for HCV.

Because hepatitis C causes chronic liver disease and often progresses much faster to severe liver damage in HIV infected persons, the National Institutes of Health recommends hepatitis C testing for all HIV infected persons. In addition, patient education about HCV prevention and care can help to reduce HCV-related morbidity and mortality among people living with HIV.

Chronic HCV infection develops in 75%-85% of infected persons and leads to chronic liver disease in 70% of these chronically infected persons. HIV/HCV co-infection has been associated with higher titers of HCV, more rapid progression to HCV-related liver disease, and an increased risk for HCV-related cirrhosis of the liver. As highly active antiretroviral therapy (HAART) and prophylaxis of opportunistic infections increase the life span of persons living with HIV, HCV-related liver disease has become a major cause of hospital admissions and deaths among HIV-infected persons.

Free Treatment Available

Like many states, Maine does not currently include hepatitis C treatment in the AIDS Drug Assistance Program (ADAP) formulary. To help assess the uptake on such an option should it be made available nationally, a drug company is providing limited free access to the hepatitis C treatments, pegylated interferon and ribavirin for eligible co-infected individuals.

Any ADAP member who is infected with hepatitis C is eligible to apply to receive a full course of treatment at no cost.

The State of Maine was given a limited number of slots for this program. To apply for one of these slots, patients must be on ADAP and their physicians must complete an application form.

Some important points about this program:

- **ADAP members who are currently receiving hepatitis C treatment are eligible to apply.**

- **The free treatment program covers the cost of the hepatitis C treatment only. It does not cover office visits, diagnostic testing, or other medications that help with side effects.**
- **Applications for this program will be accepted until December 31, 2006.**

For more information about this program and to receive an application form, please contact Mary Kate Appicelli at 1-800-821-5821.

To learn more about treating HIV and HCV Co-infection:
***Clinician's Guide to HIV/HCV Co-infection* from the**
HIV/HCV Co-infection Center of Excellence, Mountain Plains AIDS Education & Training Center
http://www.mpaetc.org/coe/resources.html

Contributed by Mark Griswold and Mary Kate Appicelli

Maine Perinatal Hepatitis B Program: An Overview

Hepatitis B virus (HBV) is primarily spread from person to person through direct contact with blood and certain body fluids. One of the most efficient modes of transmission is from an infected mother to her child during birth. In accordance with national recommendations, the Maine CDC has adopted a case management approach to reduce hepatitis B morbidity and mortality among infants born to infected mothers.

Without intervention, chronic hepatitis B infection occurs in 90% of infants infected at birth; death from chronic liver disease occurs in 15-25% of chronically infected persons. The administration of Hepatitis B Immune Globulin (HBIG) within 12 hours after birth, coupled with a complete vaccine series, almost completely prevents perinatal transmission. The Maine CDC Perinatal Hepatitis B Program provides case management services to ensure infants born to HBV infected women receive timely prophylaxis and complete the vaccination series.

According to CDC, the number of new (acute) infections per year has declined from an average of 260,000 in the 1980s to an estimated 73,000 in 2003. This may be due in part to increased hepatitis B vaccination rates as well as prenatal HBsAg screening of pregnant women. The highest rate of disease occurs in 20-49 year-olds, many of whom are women of child-bearing age.

Since 1998, approximately 1,400 cases of chronic Hepatitis B have been reported to Maine CDC, however the actual number of cases could be as much as four times higher. Hepatitis B infection is underreported because most of those who are chronically ill are asymptomatic. The perinatal hepatitis B case management program assists pregnant women with chronic hepatitis B, their health care providers, and the health care providers of their children. These individuals are given periodic reminders of vaccination and testing dates, educational resources, and program contact information. In the past three years, the Maine Perinatal Hepatitis B program has used this approach to manage between 20 and 28 cases per year.

Maine health care providers could assist in this effort by notifying Maine CDC of pregnant women who are HBsAg positive and by recommending testing, vaccination and post-vaccination testing of close household contacts to chronic hepatitis B carriers. Obstetricians can also contribute by routinely screening for hepatitis B surface antigen as part of prenatal care. Pediatricians' role in ensuring the completion of the vaccination series and ordering the post-vaccination serology completes the cycle of prevention and control.

Data from the recent survey of Maine birthing hospitals found 87 percent of pregnant women were screened for HBsAg. Sixty-two percent of infants received hepatitis B vaccination prior to leaving the hospital. Maine CDC seeks to reduce perinatal hepatitis B by promoting the adoption of birth dose protocols at all obstetrical units in Maine hospitals.

It is important to note that public health action to prevent perinatal hepatitis B has the potential to reap some of the highest returns in increased lifespan and improved quality of life for a relatively small investment of resources.

For more information contact: Alexander Dragatsi, Maine CDC Maine Immunization Program at (207) 287-4466 or alexander.dragatsi@maine.gov.

Hepatitis B Virus: A Comprehensive Strategy for Eliminating Transmission in the United States Through Universal Childhood Vaccination: Recommendations of the Immunization Practices Advisory Committee (ACIP)

Morbidity and Mortality Weekly Report, 11/22/91 vol 40 (RR-13); 1-19
http://www.cdc.gov/mmwr/preview/mmwrhtml/00033405.htm

Contributed by: Alexander G. Dragatsi and Mary Kate Appicelli

Comparison of Selected Disease Rates – Maine, New Hampshire, Vermont, New England and United States, 2001-03

Certain communicable diseases are designated as "notifiable", meaning that, by law, their occurrence must be reported to the Maine CDC. The State of Maine requires that conditions be reported in order to measure the public health impact of communicable disease, to provide immediate disease intervention as needed, and to limit the potential for disease epidemics. These objectives rely upon the timely report of notifiable conditions. To assess how well the disease reports received by Maine CDC represent the incidence of disease, we compared selected disease rates in Maine to those of neighboring states, New England and the United States.

Annual summaries of reported cases of notifiable diseases published in CDC's *Morbidity and Mortality Weekly Report* (MMWR) were reviewed for the years 2001, 2002 and 2003. State health departments report notifiable conditions to CDC, which publish these data on a weekly and annual basis. For each year, the count of cases reported and the total resident population were identified for Maine (ME), New Hampshire (NH), Vermont (VT), New England ([NE] defined as Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut) and the Unites States (US) for the following diseases: AIDS, chlamydia, cryptosporidiosis, E. coli 0157:H7, gonorrhea, acute hepatitis A, B and C viruses, legionellosis, listeriosis, Lyme disease, meningococcal disease, pertussis, salmonellosis, shigellosis, streptococcal disease -- invasive group A, syphilis (primary & secondary infection only) and tuberculosis. Reported cases and population estimates were aggregated for the three-year period to calculate case rates.

Of the 18 diseases included in this analysis, 10 disease rates (AIDS, E. coli 0157:H7, hepatitis A, listeriosis, meningococcal disease, salmonellosis, shigellosis, streptococcal disease, syphilis, and tuberculosis) were within one percentage point of rates reported by NH and VT (Table). Four disease rates (cryptosporidiosis, acute hepatitis C, legionellosis and pertussis) were comparable to national rates. The remaining four disease rates (chlamydia, gonorrhea, acute hepatitis B, and Lyme disease) varied more when compared to those reported by NH, VT, NE and US.

The results of this analysis suggest that Maine's case rates are generally consistent with those in New Hampshire and Vermont. When Maine's rates vary from neighboring states, rates are similar to those found nationwide. There were four diseases that have rates that vary more than those reported by NH, VT, NE and US. This may be due in part to the geographic variation of incidence of each disease, population demographics and other risk factors.

There are at least three limitations to this study. First, patterns of reporting notifiable conditions from local partners to state health departments and similarly from state health departments to CDC vary from locality to locality. Each state may use a different procedure to solicit and relay reports. It is also unknown if any localities included in this analysis initiated new efforts to enhance the reporting of notifiable conditions. Second, the procedure each state uses to classify a case as confirmed, probable or suspect is determined by each state agency. National guidance exists that standardizes case definitions useful for surveillance purposes, however each state can operationalize such guidance differently. Acute hepatitis C infection, for example, is a difficult disease to classify because there is no laboratory test that differentiates acute infections from chronic. Third, only selected notifiable conditions were considered in this study. Many other conditions are reportable in Maine, but were not included because of their low incidence.

Infectious disease surveillance in Maine relies upon the timely report of notifiable conditions that is representative of the true incidence of disease in the general population. We found that the majority of the selected disease rates included in this study were consistent with those that were reported by NH, VT, NE and US. These results suggest that Maine's notifiable conditions surveillance system is fairly representative of the incidence of disease, when compared to neighboring states and national patterns. Next steps to consider in assessing notifiable conditions surveillance in Maine may include evaluating the timeliness and completeness of reporting and additional study to understand differences in reported rates. To access the full-sized graph, please click on the image below.

Table: Selected diseases by count and rate* -- Maine, New Hampshire, Vermont, New England† and United States, 2001-2003.

	Maine		New Hampshire		Vermont		New England		United States	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
AIDS	128	3.3	118	3.2	53	2.9	4878	11.7	128845	15.3
Chlamydia	5173	135.2	4556	122.9	2652	145.2	60661	193.1	2495275	295.6
Cryptosporidiosis	51	1.3	74	2.0	99	5.4	538	1.3	10307	1.2
E. coli 0157:H7	79	2.1	92	2.5	47	2.6	678	1.6	9798	1.2
Gonorrhea	516	13.5	421	11.4	271	14.8	22169	53.1	1046661	124.2
Hepatitis A, acute	40	1.0	49	1.3	26	1.4	1401	3.4	27057	3.2
Hepatitis B, acute	28	0.7	65	1.8	16	0.9	767	1.8	23365	2.8
Hepatitis C, acute	4	0.1	0	0	35	1.9	73	0.2	6913	0.8
Legionellosis	16	0.4	28	0.8	46	2.5	319	0.8	4721	0.6
Listeriosis	14	0.4	12	0.3	7	0.4	178	0.4	1974	0.2
Lyme Disease	502	13.1	580	15.6	98	5.4	17412	41.7	62965	7.4
Meningococcal Disease	21	0.5	40	1.1	15	0.8	294	0.7	5903	0.7
Pertussis	134	3.5	226	6.1	356	19.5	3744	9.0	28998	3.4
Salmonellosis	456	11.9	460	12.4	232	12.7	6705	16.1	126416	15.2
Shigellosis	23	0.6	32	0.9	16	0.9	1018	2.4	67343	8.0
Streptococcus, group A	61	1.6	70	1.9	45	2.5	1061	2.5	14342	1.7
Syphilis, primary & secondary	11	0.3	28	0.8	6	0.3	448	1.1	20142	2.4
Tuberculosis	68	1.8	54	1.5	24	1.3	1439	3.4	45038	5.4

* Per 100,000 population

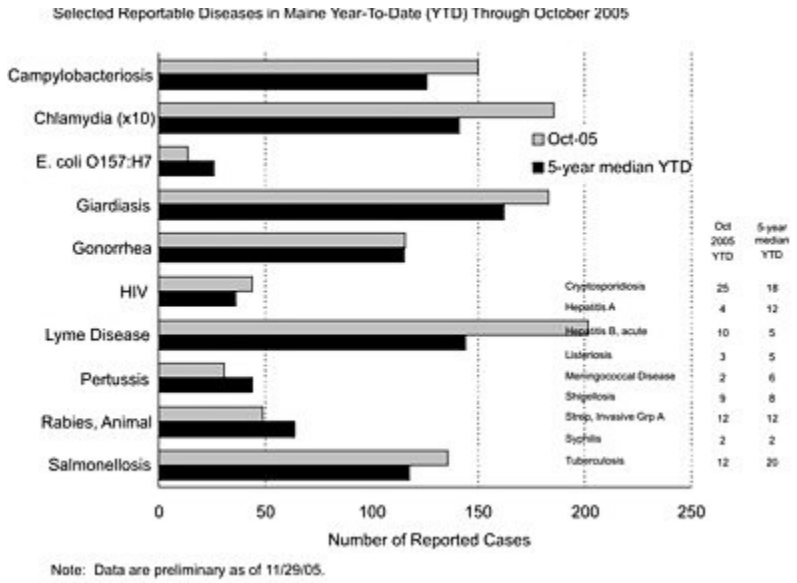
†New England is defined as Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.

Contributed by Anne Redmond

Reportable Disease Graph for October 2005

A number of infectious diseases of public health importance are reportable by law in Maine by healthcare providers, laboratories, and healthcare facilities. To monitor trends, the Division of Infectious Disease publishes a monthly graph of reportable disease in Maine. The graph displays the Year To Date (YTD) totals for the current year against the median YTD totals for the previous five-year period. By comparing the current year with the previous five years, we can determine if the incidence of a disease differs from the historical baseline. Diseases of high incidence are displayed in the horizontal bar chart; disease of low incidence are displayed in the table.

To access the full-sized graph, please click on the image below.



Contributed by Andrew Pelletier

Please call Maine CDC to report all reportable diseases:

Telephone Disease Reporting Line:
24 hours / 7 days
1 800 821-5821

Consultation and Inquiries:
24 hours / 7 days
1 800 821-5821

Facsimile Disease Reporting Line:
24 hours / 7 days
1 800 293-7534

Maine Department of Health and Human Services
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Augusta, ME 04333-0011